FINAL
NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD
MEETING SUMMARY

http://www.efdsw.navfac.navy.mil/environmental/AlamedaPoint.htm

Building 1, Suite 140, Community Conference Center
Alameda Point
Alameda, California

December 2, 2003

The following participants attended the meeting:

Co-Chairs:

Thomas Macchiarella	Incoming Community Co-Chair, Naval Facilities Engineering Command, Southwest Division (SWDIV), Base Realignment and Closure (BRAC) Environmental Coordinator (BEC)
Michael McClelland	Outgoing BEC
Bert Morgan	Restoration Advisory Board (RAB) Community Co-chair

Attendees:

Glenna Clark	SWDIV Remedial Project Manager (RPM)
Neil Coe	RAB
Debbie Collins	
Anna-Marie Cook	U.S. Environmental Protection Agency (EPA)
David Cooper	EPA
Tracy Craig	Tetra Tech EMI (Tetra Tech)
Ardella Dailey	RAB
Claudia Domingo	SWDIV RPM
Jim French	Bechtel International
Kathalina Fuentes	
Rezsin Jaulus-Gonzales	Alameda Point Collaborative
George Humphreys	RAB Vice Co-chair

Elizabeth Johnson	City of Alameda
Beth Kelly	Tetra Tech
James D. Leach	RAB
Marcia Liao	Department of Toxic Substances Control
Darren Newton	SWDIV RPM
Lona Pearson	Tetra Tech
Kurt Peterson	RAB
Kevin Reilly	RAB
Lee H. Saunders	SWDIV Community Relations Representative
Dale Smith	Sierra Club/ RAB
Jean Sweeney	RAB
Jim Sweeney	RAB
Michael John Torrey	RAB
Rick Weissenborn	SWDIV RPM

(Please note that meeting attendees that did not sign the roster were not reflected in this list.)

MEETING SUMMARY

I. Approval of Minutes

Bert Morgan, Community Co-chair, called the meeting to order at 6:20 p.m.

Mr. Morgan asked for comments on the November 4, 2003, Restoration Advisory Board (RAB) meeting minutes. The minutes were approved, with the following corrections:

Dale Smith, RAB, made the following comments:

- On page 5 of 11, first line "…allowing two-way communication between the Navy, regulatory agencies, and the public…" should be revised to "…allowing communication among the Navy, regulatory agencies, and the public…."
- On page 5 of 11, fourth paragraph, second line, "…however, most of the people in the west end do not receive the journal." should be revised to "…however, most of the people in the west end do not receive the *Alameda Journal*."

- On page 6 of 11, second paragraph, sixth line, "…then asked why the Alameda Journal was used as the only major distribution tool…" should be revised to "…then asked why the *Alameda Journal* was used as the only major distribution tool …"

- On page 10 of 11, third paragraph, fifth line, "One of the regulators concerns is that indoor air…" should be revised to "One of the regulators' concerns is that indoor air…"

Ms. Smith noted that during the November meeting a suggestion was made to include further discussion of Operable Unit (OU)-5 on the December 2003 agenda; however, an OU-5 discussion is not listed. Thomas Macchiarella the new Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) and new Navy Co-chair, stated that a detailed discussion of OU-5 would be planned for the meetings in either January or February 2004.

II. Co-Chair Announcements

Mr. Morgan made the following announcements.

The following documents are available for review in the Repository:

- Draft Geotechnical and Seismic Feasibility Study (FS) Installation Restoration (IR) Site 2, November 21, 2003.
- Site Closure Report Non-time Critical Removal Action Parcels 79, 98, 105, 106, and 107, November 4, 2003.
- Draft final Ordnance Explosives Waste/Geotechnical Characterization Report Site 2, October 29, 2003.

Mr. Morgan congratulated Jean and Jim Sweeney on their elections to the Community Co-chair and vice Co-chair positions.

Mike McClelland, outgoing BEC and Navy Co-chair, made the following announcements.

Mr. McClelland stated that he would like to thank Mr. Morgan and George Humphreys for serving as the Community Co-chair and vice Co-chair for the last year. He stated that the RAB appreciates their time and effort and that they did an excellent job in support of the RAB.

Mr. McClelland introduced Darren Newton. Mr. Newton is a new Navy Remedial Project Manager (RPM) for Alameda Point. He stated that other Alameda Point RPMs in attendance include Claudia Domingo and Glenna Clark. He also stated that Rick Weissenborn, former Alameda Point RPM, and Lee Saunders, Southwest Division's (SWDIV) Community Relations Representative, are also in attendance. Mr. McClelland stated that tonight is Mr. Macchiarella's first RAB meeting as the Alameda Point BEC. Mr. Macchiarella has about 5 years previous BEC experience and has been working with the Navy for about 10 years as a civilian employee.

Mr. McClelland presented the following overview of the milestones and activities that were accomplished during the past year (a handout was provided and is included in Attachment C):

- Initiated and completed a time critical removal action (TCRA) for polycyclic aromatic hydrocarbon (PAH) contaminated soil in the West Housing Area (WHA)
- Completed the remedial investigation (RI) for Sites 14 and 15, and submitted draft final FS reports for Site 14
- Completed work plans for chemical oxidation (chem-ox) and six-phase soil heating removal actions at Sites 9, 16, 5-1 and 5-3
- Completed a lead-based paint removal action at water tower and antenna sites
- Completed the RI and submitted draft final FS report for Site 26
- Completed the chem-ox pilot test at Sites 9, 11/21, and 16
- Completed a six-phase soil heating pilot test at Sites 4-1and 5-1
- Removed over 40,000 pounds of fuel from four sites, including Building 397, Parcel 37, Site 7, and Building 530, under the Petroleum Program
- Submitted the RI/FS for soil at OU-5
- Submitted the RI/FS for groundwater at OU-5 and Alameda Annex
- Submitted the draft FS for OU-3 Site 1 (draft will be resubmitted in April 2004)
- Updated and finalized the Alameda Point community relations plan for 2003
- Updated the BRAC cleanup plan (BCP) for Alameda Point (still in progress)

Mr. Macchiarella noted that regarding the BCP; comments have been received from various reviewers including the RAB. In the process of incorporating the comments it was noticed that too much time had passed since the document was drafted and that information reported within the draft document was outdated. Therefore, the Navy has decided to begin work on the 2004 version of the document by addressing the comments and adding current information.

Michael John Torrey, RAB member, inquired when the 2004 BCP would be available.
Mr. Macchiarella replied that currently he was unsure of the due dates, but he estimates that the draft would be due in spring 2004, based on the 2003 schedule.

III. Site 26 Draft FS Presentation

Ms. Clark introduced Jim French of Bechtel International Inc. (Bechtel), to present a summary of the Site 26 FS. A handout was provided prior to the presentation. Ms. Clark added that the comments on the FS are due on December 3, 2003, based on a previous extension of the comment period.

Mr. French explained that Site 26 is located in the interior portion of the island and contains five buildings. The Site 26 final RI submitted on November 18, 2003 delineated two-groundwater plumes at Site 26; (1) a total petroleum hydrocarbon (TPH) plume near Building 23 proposed to be handled under the TPH program, and (2) a volatile organic compound (VOC) plume near Building 20. The Building 20 plume is the subject of the Site 26 FS. The Building 23 TPH plume is located in the southern portion of Site 26, while the Building 20 VOC plume is located in the northern portion of Site 26 and is smaller than the Building 23 TPH plume.

The Building 20 VOC plume contamination is located in shallow groundwater known as the first water bearing zone (FWBZ). The Bay Mud is under the FWBZ, approximately 12 feet below

ground surface (bgs) and acts as a barrier for downward migration of contaminants. The plume is limited in its extent, and is not located near any surface water.

Mr. French presented a figure showing the total VOC contours of the Building 23 plume. He explained that the figure presents data from the RI investigation and itemizes the concentrations of individual chemicals detected in specific locations of groundwater within the plume. Each individual analyte concentration is added together to create a total VOC number. The total VOC numbers are then contoured to define the shape of the plume. The dimensions of the Building 23 VOC plume are approximately 250 feet long and 100 feet wide.

Mr. French explained that the U.S. Environmental Protection Agency (EPA) and the State of California classified the groundwater within the state according to its prospective use. The groundwater underneath Alameda Point currently is designated for municipal use. However, the Regional Water Quality Control Board (RWQCB) has proposed an amendment to dedesignate the municipal use of the shallow groundwater at certain areas of Alameda Point and along portions of the Oakland Shoreline. Site 26 is located within the proposed dedesignation area of Alameda Point.

Mr. French explained that the Site 26 FS describes alternatives for the cleanup of contaminants under the Comprehensive Environmental Response and Compensation Liability Act (CERCLA) process. The dedesignation of the municipal supply classification is likely in the future and recently the RWQCB issued a letter to the Navy stating the groundwater meets the exemption criteria.

Ms. Sweeney asked if dedesignation of the groundwater means that it would no longer be used. Mr. French replied that the portions of Alameda Point and the Oakland Shoreline would be declassified from municipal use from the state basin plan, because the RWQCB has determined that the water is too saline or doesn't meet the criteria for drinking water.

Anna Marie Cook, EPA, commented that the groundwater still meets the criteria for protection as a potential drinking water source under EPA guidance for groundwater classification. Regardless of the state's decision for exemption and if the dedesignation is completed, the federal standard still applies. The groundwater is a Class II aquifer that meets yield criteria and total dissolved solids (TDS) criteria. Mr. Torrey asked if the groundwater meets the criteria as a potential drinking water source, why would the groundwater be dedesignated. Ms. Cook replied that the state is allowed to exempt an aquifer if the state feels it is necessary. However, during a CERCLA cleanup the most stringent and conservative guidelines and regulations apply to cleanup. In this case the federal guidelines are more conservative than the state guidelines.

Ms. Smith noted that the Sierra Club and the Audubon Society are not concerned about humans drinking the water, but that Site 26 is adjacent to a federal wildlife refuge. The Sierra Club and Audubon Society are concerned that although there may not be drinking water available for humans on Alameda Point, there are rare and endangered animals that might come into contact with groundwater contaminants migrating to surface water or into the Bay. Since there is no groundwater monitoring plan in place to determine flow and output, there is no way of knowing if the animals are being exposed.

Kevin Reilly, RAB, asked about the differences between the federal and state drinking water criteria. Ms. Cook replied that the federal standards protect all water that can yield 200 gallons a

day and are below 10,000 parts per million (ppm) TDS. The state beneficial use criteria also require a yield of 200 gallons a day but TDS must be below 3,000 ppm. Ms. Cook stated that it might appear that the state has a more stringent standard because of the lower TDS threshold; however, 3,000 ppm TDS protects a smaller volume of water than would be embodied with 10,000 ppm TDS criteria. The federal standards are in place to protect the viability of the aquifer, the EPA will not abandon the aquifer just because the state says that it meets their criteria for exemption.

Mr. French continued with his presentation. He stated that the objectives set forth in the FS were to protect human health by preventing use of contaminated groundwater until remedial action objectives (RAO) are achieved. The RAO are numerical targets, and for the purpose of this FS, drinking water maximum contaminant levels (MCL) were used. Technologies were identified and reviewed. The retained technologies after review include no action, land use controls (LUC), monitored natural attenuation (MNA), in-situ bioremediation (enhanced MNA), and in-situ chemical oxidation (ISCO). The technologies were combined into Alternatives to address the contamination. The Alternatives are identified as Alternative 1- no action, Alternative 2- MNA/LUCs, Alternative 3- ISCO/enhanced MNA/LUCs, and Alternative 4 is a variation of Alternative 3 but only the source area of the plume would be treated.

Mr. French stated that Alternative 2 would involve drilling six new wells at various locations intended to track the condition of the plume over time. Annual groundwater monitoring would be conducted and LUCs would be used to prevent extraction of the groundwater until RAOs were accomplished. Reporting and periodic reviews would also be conducted to ensure that MNA is effective.

Kurt Peterson, RAB, asked about the timetable for Alternative 2. Mr. French replied that groundwater modeling indicates that 70 years may be required for contaminant concentrations to reach drinking water MCLs.

Mr. French stated that Alternative 3 would involve a series of injection wells to inject chemical oxidants into the groundwater, which chemically oxidize the VOC contaminants. Following the chemical injection, enhanced MNA would be added to stimulate microbial growth to reduce residual compounds. Installation of monitoring wells for long-term groundwater monitoring and LUCs would also be used during and after the process.

Ms. Sweeney asked why enhanced MNA would be used when it also leaves some residual compounds. Mr. French replied that the enhanced MNA would be formulated to remove the residual contaminants from the chemical oxidation treatment. No residual compounds would be expected to remain after both technology treatments.

James Leach, RAB, asked about the oxidants that would be used. Mr. French replied that the oxidants used would be similar to current compounds being used at Sites 9, 11, 16, and 21. It is a process that uses diluted hydrogen peroxide and chelated iron compounds to induce a Fenton's reaction in the groundwater.

Mr. French stated that Alternative 4 is very similar to Alternative 3 except that a smaller area of the plume would be chemically oxidized. This strategy chemically oxidizes the areas with higher contamination and the enhanced MNA and LUCs would address the remaining contamination. A smaller area would be treated to reduce the cost for the ISCO.

Mr. Peterson asked if one of the methods have been proven superior to the other methods at other sites with similar contaminants. Mr. French replied that each method has its own merits when applied at different sites. Chemical oxidation has been used quite extensively and depending on the site and concentration, a 90-percent reduction of contaminant mass can be expected. Enhanced bioremediation also has shown promise, but it is seldom that a single technology will treat contaminants like these down to drinking water levels.

Mr. Peterson inquired about the depth of the contaminated groundwater. Mr. French replied that the contaminated groundwater is located in the fill beneath the pavement at the surface, and the Bay Mud located 12 feet bgs. Mr. Peterson asked if pump and treat technology of the groundwater has been evaluated. Mr. French replied that pump and treat technology has been considered, however, very rarely can you get complete removal of all the contaminants. The contaminants tend to sorb on to the soil particles and get trapped between the soil particles and adhere to the clays in the soil particles. Pumping reduces the concentrations to a certain level but not to completion. Mr. Peterson stated that generally the other alternatives presented here have not been proven to be very successful at other sites either. Kevin Reilly, RAB, asked where the groundwater would be disposed after pumping. Mr. Peterson stated that it might be easier to treat after it is removed from the ground. Mr. French stated that a place to discharge the water would need to be found, either to a sanitary sewer or the San Francisco Bay, where stringent discharge standards would have to be met.

A community member asked for more specific information on the LUCs that are being considered. Mr. French replied that the LUCs mechanisms being considered rely on the experience of the Marsh Crust record of decision (ROD) for Alameda Point. The LUCs could include a combination of possible deed restrictions and covenants restricting the use of the property, including restrictions on groundwater consumption.

Mr. Humphreys asked if trichloroethene (TCE) is one of the solvents found at Site 26, and if it degrades into vinyl chloride. Mr. French replied that TCE is one of the solvents and that it can degrade into vinyl chloride. Mr. Humphreys asked if exposure to vinyl chloride has been considered. Mr. French replied that vinyl chloride is present in the groundwater and is one of the reasons that the original solvent is suspected to be TCE. The source of the contamination was a washdown area for aircraft parts. TCE has been used for the same type of application at other Navy industrial sites similar to this. The TCE can get into the groundwater and under the right conditions will degrade into dichloroethene and then vinyl chloride. Each time the compound transforms it casts off a chlorine atom. If the process is effective the compound will degrade into ethane, a non-toxic gas.

Kevin Reilly asked about the depth of the contamination. Mr. French replied that it is very shallow water overlying the Bay Mud from the groundwater surface at about 6 feet bgs to 12 feet bgs. Ms. Smith asked if the contaminants could come up to the ground surface during heavy rains and arise the water table. Mr. French replied that it would depend on the regional conditions and the groundwater; since the area is paved, it is very unlikely that water will infiltrate from the surface. However, infiltration of water from other areas not paved is possible. Ms. Smith noted that cracks in the pavement could allow water infiltration. Mr. French replied that he is not aware of a previous flooding condition at the site where groundwater has risen above the ground surface.

Mr. Peterson asked for clarification on the LUC limitations and if they included the 2-foot digging limitation. Mr. French replied the LUCs would be based on a restriction or control of extraction groundwater in the area. Ms. Smith asked if there would be any restrictions on the soil. Mr. French replied that there might be restrictions from digging into the groundwater.

Ms. Sweeney stated that during the Catellus Property redevelopment they dug deeper than 4 feet. Ms. Sweeney asked how the property would be redeveloped under a digging restriction, and if a digging restriction would mean that the property would be restricted from redevelopment for 70 years. Mr. McClelland replied that the groundwater would have to be managed during redevelopment. If groundwater is encountered it would need to be pumped and treated prior to discharge or tanked away. Ms. Smith stated that it is very costly; Berkeley paid $60,000 per tanker for groundwater removal.

Mr. Macchiarella stated that the wording of the LUCs would not strictly ban any future encounter with the groundwater or the building of residences; however, the wording of the LUCs would impose certain conditions on anyone proposing to pump groundwater or build residences. The proposed methods for meeting the conditions typically would be provided in soil management and groundwater management plans, and the LUCs would require that regulatory agencies review the plans to make sure they meet the criteria.

Mr. Peterson stated that a portion of Building 20 is directly on top of the plume; thus, there is a potential for humans to come in contact with groundwater, if the building ever were removed. Mr. Macchiarella stated that the LUC in this case might not allow the disturbance of soil below a certain depth without implementing a certain plan. The plan would require certain controls such as health and safety measures, disposal requirements, etc.

Continuing with his presentation and referring to slide 16, Mr. French stated that the estimated cost figures of each alternative are represented in net present value, which is the cost of the entire duration of each alternative at today's dollars. Mr. Humphreys asked what interest rate was used to estimate the cost; Mr. French replied that he was unsure, but that it was probably 5 percent. Mr. French stated that the duration of each alternative is equal to the time needed to reduce contaminants to drinking water levels, as predicted by the groundwater model.

Ms. Cook commented that there is a problem with EPA guidance for developing cost estimates for long-term remedies. When EPA came out with the guidance it was anticipated that a long-term remedy would be no longer than 30 years in duration. The wording of the guidance and its cost formulas imply that there is no more cost after 30 years. Therefore, the costs as shown on slide 16 for Alternative 2 and Alternative 4 are not accurate for the represented durations. After 30 years the EPA formulas calculate the remaining duration at current day cost, thus reducing the projected cost at future day dollar assumptions.

Mr. French stated that Alternatives 2, 3, and 4 were scored competitively with balancing criteria. There are tradeoffs between the three alternatives and uncertainties with regard to the performance of each technology, and the predictive capability of the groundwater model used.

Mr. French stated that the plume appears to be a good candidate for MNA in Alternative 2 because it is very small, is located inland, and the groundwater can be monitored easily over a long duration. The actual timeframe to determine that the plume is stable and not a threat to human health or the environment may not require the estimated 70 years, since the duration is

based on groundwater modeling.

Alternative 3 is presented as an option to accelerate the plume cleanup. This alternative was evaluated on the assumption that it would work. Based on results of other sites around Alameda it may or may not work.

Mr. Peterson stated that all of these alternatives are based on the assumption that they will work; Alternative 2 is based on the assumption that nature will take its course. Mr. French stated that Alternatives 2 and 4 were based on the groundwater model. The groundwater model was not used with Alternative 3; it was merely assumed that the technology would clean up the aquifer in 3 years.

Mr. French stated that Alternative 4 also was presented as an option to accelerate the plume cleanup and is the most expensive option. The assumption is that the ISCO process would remove 90 percent of the contamination from the groundwater. The extended time frame for MNA to complete the process increases the costs compared to Alternative 3.

Mr. French stated that the draft FS report recommends Alternative 2, because the plume appears to be a good candidate for MNA, based on its inland location away from surface water, its TCE breakdown products, which are evidence of biodegradation, and its relatively low contaminant concentrations; in addition, Alternative 2 requires the least cost. The draft FS report also recommends Alternative 2 because it is responsive to the intent of the Basin Plan dedesignation amendment for low-risk plumes.

Mr. Torrey asked if the Navy would be here in 70 years to see this Alternative 2 to completion. Mr. Macchiarella replied that the Navy would continue to be responsible for its cleanup responsibilities. Mr. Macchiarella noted that the groundwater model predicted that 70 years would be needed to clean up the plume; however, enough data might be accumulated at some point to justify and earlier ending of the long–term monitoring, if the plume is not migrating and is continuing to degrade.

Ms. Cook stated that she disagrees with Mr. Macchiarella's opinion. She stated that the ROD would dictate the duration of the groundwater monitoring until the RAOs are met. This will ensure that the cleanup is not abandoned. However, once the RAOs are achieved then groundwater monitoring may be discontinued even if the RAOs are met within 20 years. Mr. Macchiarella commented that EPA guidance probably has not been tested in that regard yet.

Mr. Leach stated that he has difficulty in agreeing that Alternative 2 is an action. Considering the aggressive way we are trying to transfer the base, the best action that can be taken should be better than nothing. He stated that he has seen very good results with pump and treat technologies that re-inject the water back into ground, and that technologies are available to oxidize these materials. He stated that to select doing nothing as an action is a new precedent.

David Cooper, EPA, stated that his impression of the presentation is that the Navy already has selected a remedy. He added that the Navy cannot select a remedy at this time and that it is not appropriate that the Navy announce their preferred alternative at this point. The preferred alternative should be expressed to the public in a proposed plan, in which all the alternatives are laid out, with a fact sheet sent to the entire mailing list and a public comment period. Mr. Cooper then asked the Navy when the proposed plan would be released to show the preferred alternative.

Mr. Macchiarella stated that the proposed plan is due after the FS is finalized. At this time the Navy is identifying recommended alternatives, and unless there is significant comment to the contrary, also is identifying most of the information that would be stated in the proposed plan. Following the official CERCLA process, the public has a comment period on the proposed plan. In our case, we have the benefit of the RAB and regular meetings where we can get comments and input before issuance of the proposed plan.

Mr. Cooper stated that typically the lead agency would know the proposed alternative 4 months or 5 months prior to the start of the actual 30-day comment period, and would share all the information on the FS regarding the strengths and weaknesses for each alternative. He stated that it is inappropriate to begin a debate on a selected remedy before the community members have had a chance to submit their comments.

Ms. Smith stated that there have been problems with this before, as in the Coast Guard Housing Area. The same process occurred and there was no discussion of the alternatives, alternative costs, or timelines. She noted that Mr. Cooper is stating what the RAB has been saying for a year that the decision has already been made and the community does not get a chance to comment on the FS, because the Navy is going into the final decision. Mr. Macchiarella replied that the comment period is open for the FS; the decision would not be made until the ROD. Ms. Clark stated that the FS is a recommendation only; nothing has been officially selected or decided.

Ms. Sweeney asked about the time parameters for the comment period. Ms. Clark replied that the comments for the draft FS report are due tomorrow December 3, 2003, and that the comment period had already been extended 3 months for community review. However, if anyone has comments they should still submit them, all comments are important to the Navy and will be considered.

Mr. Peterson asked about the City's plans for the land at Site 26, and whether those plans call for the hangars to remain indefinitely at the site. Ms. Johnson stated that the hangars are part of the historic district and currently the hangars are being used as warehouse space. Ms. Smith asked if the property is listed on the National Register of Historic Places (NRHP). Ms. Johnson replied that the property is not currently listed on the NHRP, but is eligible for listing on the NRHP, which has the same protections as if it were listed. Ms. Smith stated that since the property is not actually listed on the NRHP the City might decide sometime in the future to change the property use. Ms. Johnson stated that Ms. Smith has a good point but that the reuse plan currently shows the buildings as being preserved.

Ms. Johnson stated that according to the terms of the biological opinion, new construction could take place only in the area within the footprints of existing buildings. Therefore, if a building needs to be replaced, then the new building must be the same height and size as the previous building, due to the close proximity to the least tern nesting area.

Ms. Smith commented that Alternative 3, at a cost of $2.4 million and duration of 3 years, is more reasonable than Alternative 2 at a cost of $1.8 million and duration of 70 years.

IV. BRAC Cleanup Team Activities

Mr. Macchiarella stated that the November 2003 BRAC Cleanup Team (BCT) meeting was not held. Mr. Macchiarella inquired if other BCT members had items or topics to discuss.

Ms. Cook stated that some residents of the Bessie Coleman Center are having respiratory problems. These residents are concerned that their respiratory problems may be caused from PAH removals but they may be caused by mold. Ms. Sweeney has been working closely with the residents along with Rick Weissenborn, and EPA. Ms. Sweeney stated that the complaints are not just from the Bessie Coleman Center residents. Ms. Cook stated she would keep the RAB informed on the resident's respiratory problems.

V. Community and RAB Comment Period

Tracy Craig, Tetra Tech, stated that sociology and chemistry department students from St. Mary's College have conducted a study on the sociological impacts of residents living on a Superfund site. The results of their study will be presented in a poster board session on Monday, December 8, 2003 at the Alameda Point Collaborative (APC) offices between the hours of 1:00 to 3:00 p.m. Ms. Smith asked if those study results could be posted on the website. Ms. Craig stated she would explore that possibility.

Ms. Craig stated that the RAB member contact list has been updated and is available for the RAB members.

Ms. Craig stated that the first community relations focus group meeting will be held in this room, the Community Conference Room of Building 1, on Tuesday December 9, 2003 at 6:30p.m. An e-mail will be sent out as a confirmation for the meeting place. The purpose of the focus group meeting is to craft ideas for the content of the next community newsletter.

The meeting was adjourned at 7:50 p.m. and the annual holiday party was begun.

ATTACHMENT A

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA
December 2, 2003

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

DECEMBER 2, 2003 6:30 PM

ALAMEDA POINT – BUILDING 1 – SUITE 140
COMMUNITY CONFERENCE ROOM
(FROM PARKING LOT ON W MIDWAY AVE, ENTER THROUGH MIDDLE WING)

TIME	SUBJECT	PRESENTER
6:30 - 6:40	**Approval of Minutes**	**Bert Morgan**
6:40 - 6:55	**Co-Chair Announcements**	**Co-Chairs**
6:55 - 7:30	**Site 26 Draft Feasibility Study Presentation**	**Bechtel Environmental, Inc.**
7:30 – 7:35	**BCT Activities**	**Judy Huang**
7:35 – 8:00	**Community & RAB Comment Period**	**Community & RAB**
	RAB Meeting Adjournment	
8:00- 9:00	**Informal Discussions with the BCT/RAB & Holiday Party**	

ATTACHMENT B

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS

Feasibility Study IR Site 26, Presented by Jim French, Bechtel Environmental. December 2, 2003. (12 pages)

Summary of Key Milestones Achieved at the Former Naval Air Station Alameda Achieved During 2003, Presented by Thomas Macchiarella, Navy. (1 page)

Feasibility Study IR Site 26, December 2, 2003

(12 pages)

Feasibility Study IR Site 26

Alameda Point Restoration Advisory Board Meeting

December 2, 2003

AGENDA

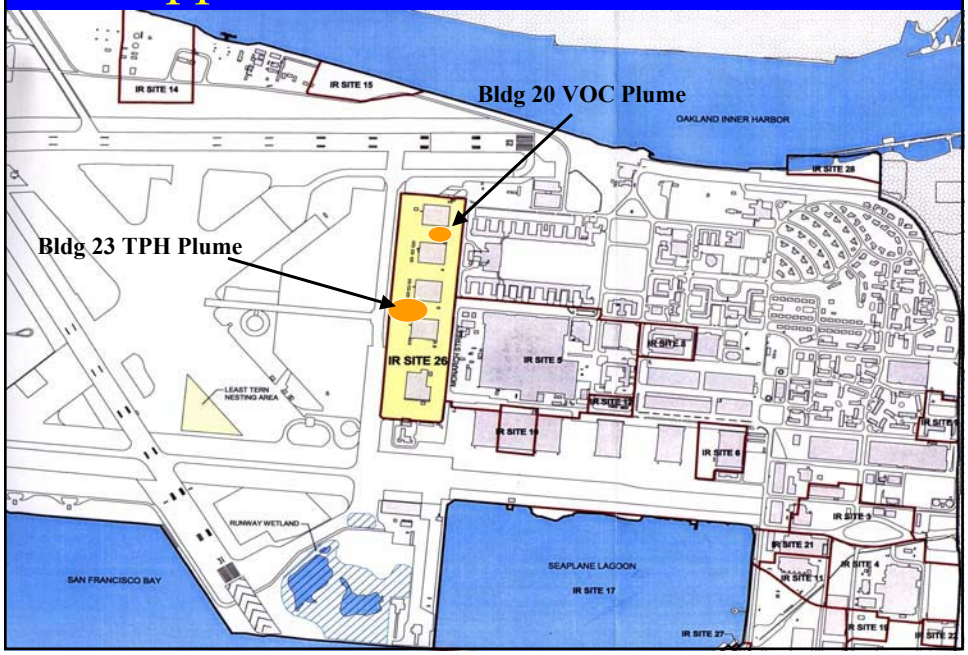
- Background
- Feasibility Study Alternatives
- Conclusions
- What's Next

Background

- Final RI with responses to agency comments was submitted on November 18;
- Two groundwater plumes delineated
  - TPH Plume near Bldg 23
  - VOC plume near Bldg 20
- Bldg 23 TPH plume being handled under Alameda Point TPH program.
- Bldg 20 plume is the subject of the FS.

RI – Remedial Investigation
IR – Installation Restoration
TPH – Total Petroleum Hydrocarbon
VOC – Volatile Organic Compound

Approximate Plume Locations



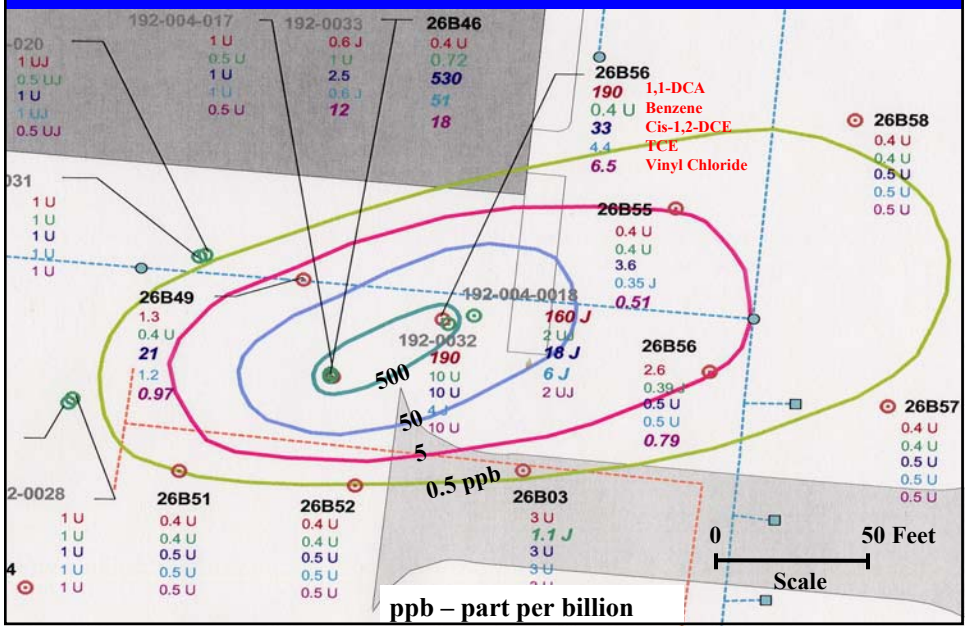
Bldg 20 Plume Characteristics

- Shallow generally low-level VOCs (e.g. TCE, DCE, VC) in FBWZ overlying Bay Mud
- Concentrations relatively low compared to other Alameda Point groundwater plumes (only one detect > 0.5 ppm)
- Limited in extent and located in interior portion of Base, away from surface water

TCE – trichloroethene DCE – dichloroethene VC – vinyl chloride

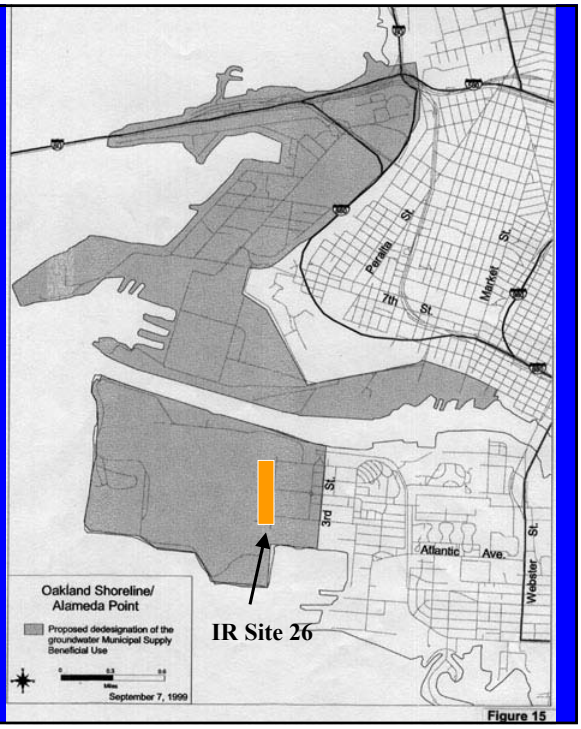
FBWZ – first water-bearing zone ppm – part per million

Posting Plot with Total VOC Contours



IR Site 26 is within the area proposed for Dedesignation of Groundwater Municipal Use by RWQCB & has been Exempt from Municipal Use

RWQCB – Regional Water Quality Control Board



FS – Bldg. 20 Plume

- The FS provides alternatives for addressing the contaminant plume(s) under CERCLA
- Dedesignation of the municipal supply classification will likely occur in the future.
- RWQCB issued a letter to the Navy stating that groundwater meets the exemption criteria for municipal use

RWQCB – Regional Water Quality Control Board

Response Action Objectives

- Protect human health by preventing extraction of VOC-impacted shallow groundwater for domestic use until RAOs are achieved.
- It was assumed for FS purposes that RAOs were drinking water MCLs

RAO – remedial action objective **MCL – maximum contaminant level**

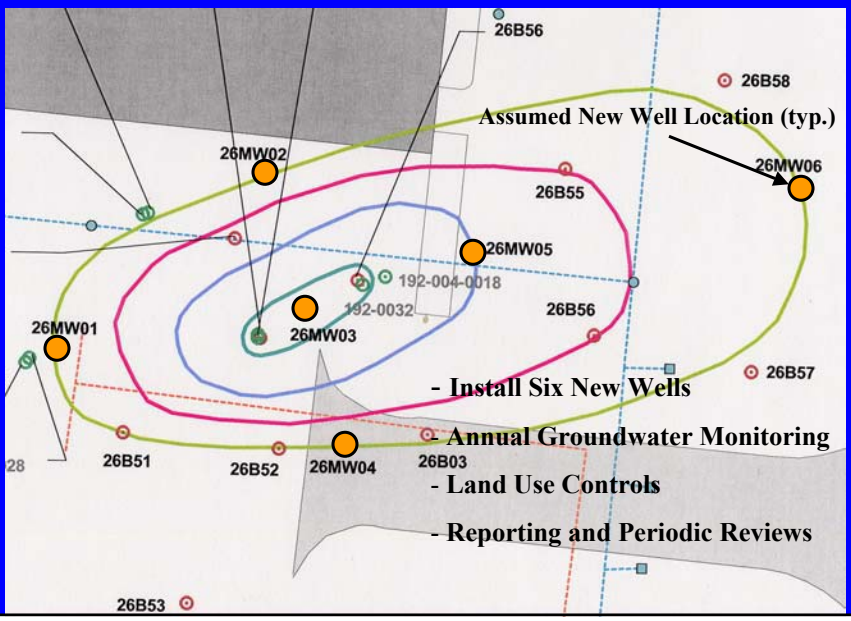
Retained Technologies

- No Action
- Land Use Controls (LUCs)
- Monitored Natural Attenuation (MNA)
- *In Situ* Bioremediation (Enhanced MNA)
- *In Situ* Chemical Oxidation (ISCO)

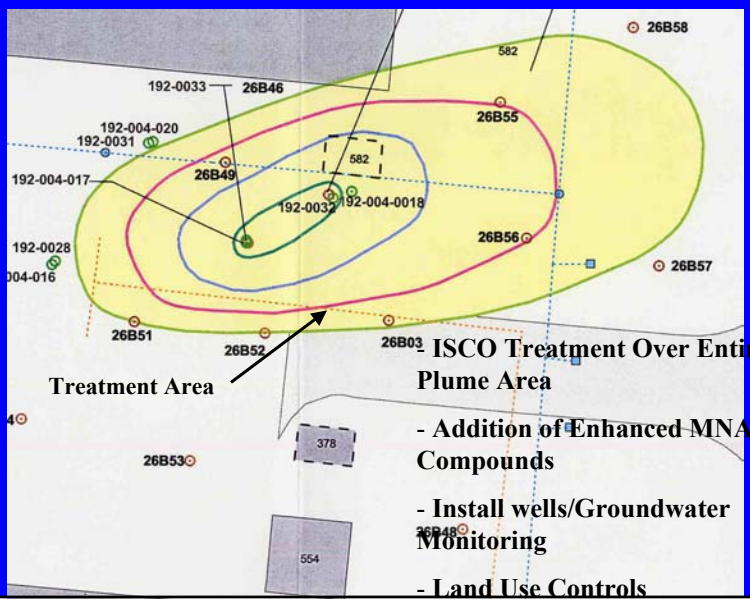
Remedial Alternatives Evaluated

- Alt. 1 – No Action
- Alt. 2 – MNA/LUCs
- Alt 3 – ISCO/Enhanced MNA/LUCs
- Alt 4 – ISCO Source Area Treatment/ Enhanced MNA/LUCs

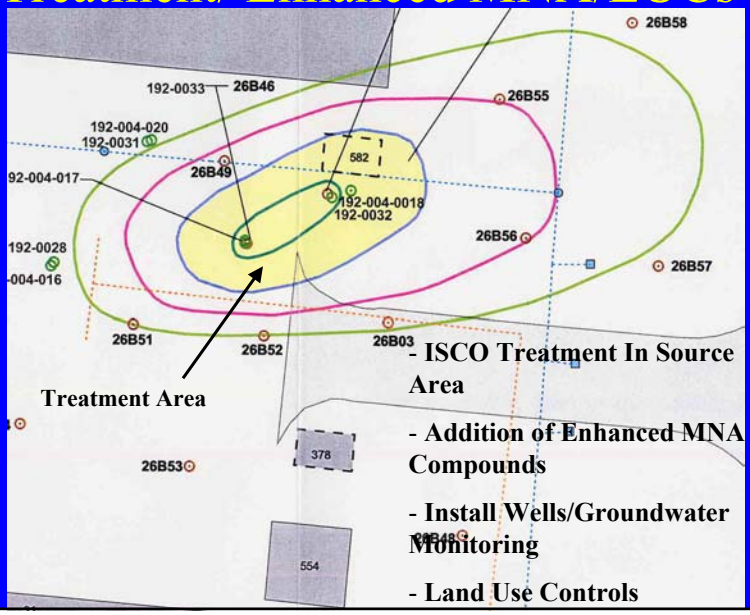
Alternative 2 MNA/LUCs



Alternative 3
ISCO/Enhanced MNA/LUCs



Alternative 4 ISCO Source Area Treatment/ Enhanced MNA/LUCs



- ISCO Treatment In Source Area
- Addition of Enhanced MNA Compounds
- Install Wells/Groundwater Monitoring
- Land Use Controls

Assumed Duration and Estimated Cost

Alternative	Assumed Duration (yrs)	Estimated Cost* $mil)
1	NA	NA
2	70	1.8
3	3	2.4
4	40	3.0

* - Net Present Value NA – Not Applicable

Conclusions

- Alternatives 2, 3, and 4 scored competitively among the balancing criteria.
- There are trade-offs among the three alternatives.
- Uncertainties with regard to
  - ISCO performance
  - enhanced MNA performance
  - predictive capacity of the groundwater model

Conclusions (cont.)

Alt. 2 – MNA/LUCs

- Appears to be good candidate for MNA.
- Highly implementable and cost-competitive (lowest costs other than No Action)
- Estimated duration of MNA to achieve RAO-based levels (70 years) was based on groundwater modeling.
- The actual time frame to verify the plume is stable and doesn't threaten human health and the environment may be less than 70 years.

Conclusions (cont.)

Alt. 3 – ISCO/Enhanced MNA/LUCs

- Intended to offer an option for accelerating the plume cleanup; assumes ISCO/ Enhanced MNA can meet MCLs in 3 years.
- Costs higher than Alt. 2 & lower than Alt. 4
- However, if performance of *in situ* technologies is limited, it could take much longer than 3 years to achieve RAO-based levels.

Conclusions (cont.)

Alt. 4 – Source Area ISCO Treatment /Enhanced MNA/LUCs

- Intended to offer an option for accelerating the plume cleanup.
- Highest costs
- 90 percent ISCO contaminant reduction assumption was made; however may not be achievable.
- An extended time frame (i.e. 40 years) appears necessary to complete the treatment with MNA, which increases cost compared to Alternative 3.

Recommendations

The Navy recommends Alt 2 because:

- Plume appears to be a good candidate for MNA.
  - Inland location
  - Evidence of biodegradation
  - Relatively low concentrations
- Lowest cost

Recommendations (cont.)

The Navy recommends Alt. 2 because:

- Alt. 2 is responsive to the intent of the Basin Plan dedesignation amendment for low-risk plumes that a monitoring program be established to verify that the plume is stable and will not impact ecological receptors or human health.

What's Next?

- Agency Review (early December 2003)
- Draft Final FS (probably February 2004)

Summary of Key Milestones Achieved at the Former Naval Air Station Alameda
Achieved During 2003,

(1 page)

Summary of Key Milestones Achieved at the Former Naval Air Station Alameda During 2003

- Initiated and completed Time-critical Removal Action for PAH-contaminated soil in West Housing Area
- Completed RI for Sites 14 & 15
- Submitted Draft Final FS for Site 14
- Completed work plans for Chemical Oxidation & Six Phase Heating Removal Actions at Sites 9, 16, 5-1 and 5-3
- Completed lead based paint removal action at the water tower and antenna sites
- Completed RI for Site 26
- Submitted Draft FS for Site 26
- Complete the chemical oxidation pilot test at Sites 9, 11/21, and 16
- Completed six phases soil heating pilot test at Sites 5-1 and 4-1
- In the Petroleum program, the following quantities of fuel have been removed from the following sites since January 1, 2003:
  - ❖ 220 pounds at the Building 397 Jet Fuel Spill
  - ❖ 1,475 pounds at the Parcel 37 Aircraft Fuel Storage Area
  - ❖ 1,755 pounds at the Site 7 NEX Gas Station
  - ❖ 37,569 pounds at the Building 530 Aircraft Defueling Area

Milestones not listed on original slide but identified by Michael McClelland:

- Completed OU-5 RI and Draft FS for soil
- Completed RI/FS for groundwater at OU-5 and Alameda Annex
- Submitted draft FS for OU-3 (which will be revised spring 2004)
- Updated the Community Relations Plan
- Updated BRAC Cleanup Plan (still in progress)